OSCE for the Medical Licensing Examination in Korea

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Objective structured clinical examinations (OSCEs) will be introduced in the Medical Licensing Examination in Korea next year. To evaluate the competency of new medical graduates, a written examination is not sufficient to test the clinical skills and attitudes of medical school graduates. The Korean Society of Medical Education and National Health Personnel Licensing Examination Board have been preparing for OSCEs to be included in the licensing examination for a number of years, following the declaration by the Minister of Health and Welfare, of the Korean Government. One center in Seoul will provide two identical sets of stations. The OSCE will have 12 stations. Six short stations will test procedural techniques and skills, and six long stations will feature standardized patients. The test items for the short stations and the clinical presentations of the long stations will be made available to applicants. However, the checklists will not be made available. It is hoped that the OSCE will raise the standard of competencies of new medical doctors and change clinical education in the medical schools.

Key Words: attitudes, clinical skills, medical licensing examination, OSCE
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Background

Every country has its own regulatory or legal system for the legitimate medical practice of medical doctors, and issues the medical license or makes doctors register. To gain a license or registration, doctors must prove their medical authenticity. Countries such as Taiwan, Korea and Japan mandate medical school graduates to pass the Medical Licensing Examination, and others such as England, Australia and Hong Kong accredit medical schools.

How can applicants' clinical competency be assessed properly? According to Miller's pyramid (Figure 1), clinical competency consists of four levels, as *knows*, *knows how*, *shows how* and *does*. The skill test is aimed at the *shows how* or behavioral competency [1]. We are trying to assess clinical competency with valid and reliable test methods to issue licensure to physicians who will be entering the workforce. However, assessing behavior is very difficult and every test method has its limitations. Nevertheless, from the literature and from the experience in other countries, we feel that the objective structured clinical examination (OSCE) is a valid method for assessing the clinical competence of applicants.

The National Health Personnel Licensing Examination Board (NHPLEB), which is akin to the National Board of Medical Examiners (NBME) in the USA, is responsible for the Skills and Attitude Test of the Medical Licensing Examination. As in Taiwan, the Korean Medical Licensing Exam has been a written exam for more than 60 years, and is usually given once a year. If a medical school graduate passes the Licensing Exam, he/she becomes a licensed medical practitioner. There are various modes of assessing the various levels of clinical competency (Figure 1) [1]. It can be seen, therefore, that a written examination cannot assess the clinical competency of a candidate.

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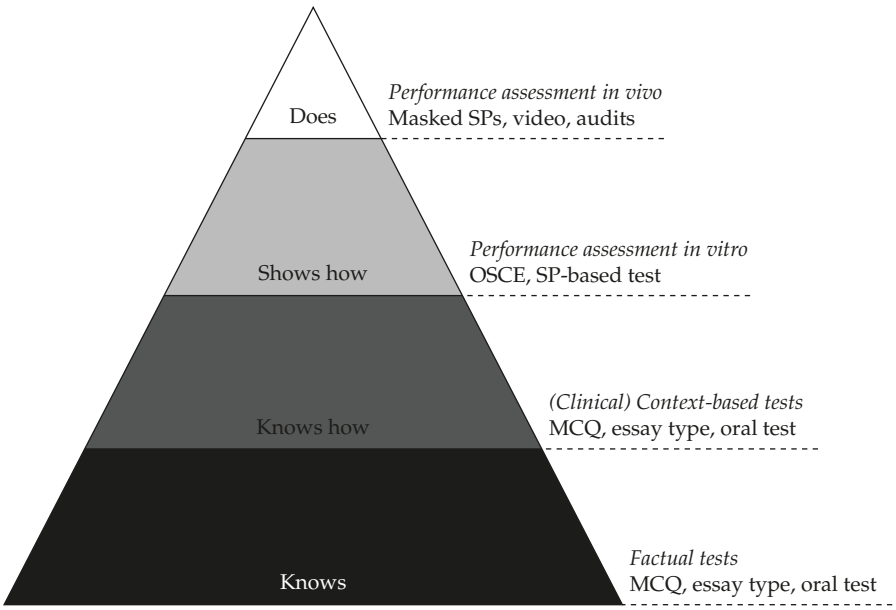

Figure 1. *Assessment mode for each level of Miller's pyramid.*

The Korean Society of Medical Education (KSME) proposed the slogan: "Any unqualified doctor cannot practice for our people". Actually, we have not had good test methods to assess a physician's skills and attitude. Now, we have chosen the OSCE, which was proposed by Harden [2], as a skill test in Korea.

In June 2006, the Minister of Health and Welfare of the Korean Government declared that the skill test will be applied, starting with graduates in 2009. This means that the first Skill Test for Medical License will take place in late 2009 or January 2010. The Minister's declaration was made at the request of the KSME and the NHPLEB. We have also had some experience with a skill test since 2004, which has been used for foreign doctors who want a Korean license [3]. Some people raised the possibility that the Government intended to create a barrier against foreign doctors coming to our country. However, it was introduced to ensure the clinical competence of foreign graduates. The Task Force Team for the Skill Test of NHPLEB prepared and presented the outline of an OSCE in December 2005 [4].

Outline

In Korea, there are two conditions for becoming a medical doctor. The first is graduation from a medical school, and the other is passing the licensing examination. The written licensing exam has greatly changed in style and content. Now, we will add a skill component.

The skill test will begin in September 2009. The applicant must be a graduate or in the final year of medical school. The result of the skill test will be a pass/fail, and not presented as a score. The outline is as follows:

1. The Medical Licensing Examination will consist of Clinical Skills (CS) and Medical Knowledge (MK, including basic and clinical medical sciences) examinations. The examinee who passes the CS examination (September–November 2009) will be eligible for the MK examination (January 2010).
2. The OSCE will have 12 stations (10 minutes per station).
3. Of the 12 stations, six stations will have a standardized patient (SP) and will assess clinical skills as well as communication skills and clinical reasoning. Each station will take 10 minutes.
4. Six stations are for procedural skills, such as simple sutures, venous blood sampling, and measuring blood pressure.
5. A center will have two sets of 12 stations and will run three cycles per day, which will cover 72 examinees per day. To examine up to 3,600 examinees a year, it will take approximately 50 working days.
6. The assessor will be a professor or a physician with a checklist in each station. The cut-off level will be determined by the modified Angoff method.

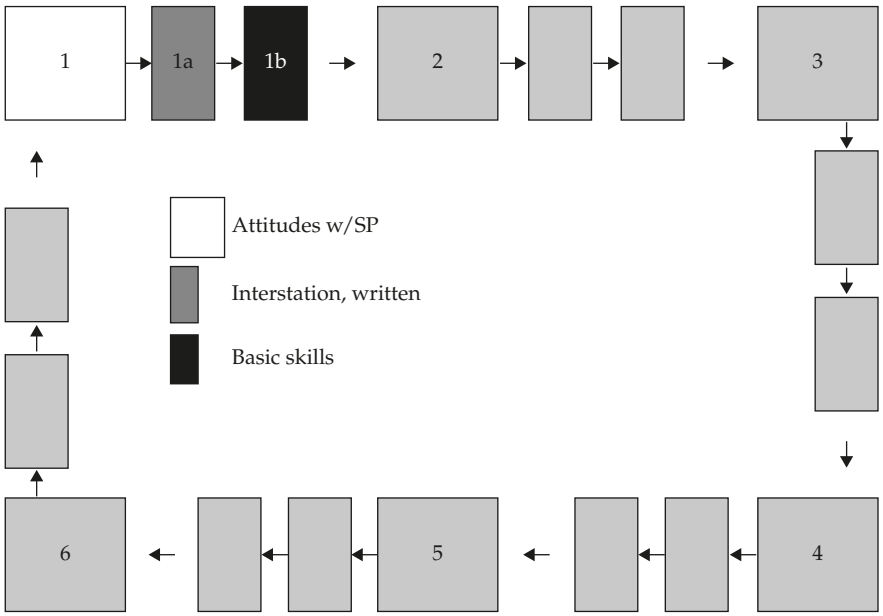

Figure 2. *Scheme of the objective structured clinical examination stations.*

7. For a single test day, 28 SPs (seven SPs × 2 turns/day × 2 sets) and 28 assessors will be needed.

OSCE Stations

The OSCE will be composed of six modules, and each module will comprise a long station for skills and attitude with an SP and a short station for basic procedural skills. One optional interstation written test will be located between the long and short stations (Figure 2).

Applicants will spend 10 minutes in the long station, and 5 minutes in the short station. An additional 5 minutes will be for the interstation written exercise. Twelve applicants will be tested in each cycle. Six will start with long stations and six with short stations, with 120 minutes for a cycle and 5 minutes for a break.

For the attitudes and skill testing (long stations), we have developed 56 clinical situations including easy bruising, insomnia, anxiety, drinking problems and giving bad news. The list of clinical situations or settings is now available to the medical schools and students, but the checklist will not be available (Table 1).

The applicants will be assessed on their competencies of communication skills, interviewing skills, history-taking, brief physical examination, and ordering laboratory tests. The assessor will be a professor or a physician who has been trained. The assessor will be at each station and will use a structured checklist.

For the short stations assessing basic procedural skills, we have chosen 40 items such as simple suture of laceration, rectal examination, Foley catheter insertion, application of splint (Table 2). The short station will be of 5 minutes duration.

The interstation exam is optional, and will be associated with the preceding long station. Questions will be related to the clinical situation presented by the SP, and will focus on decision-making, differential diagnosis, further diagnostic plan, and patient management, for example. It is a written test and will take 5 minutes. It there is no interstation assessment, the applicant will take a 5-minute rest before the basic skill test.

Test Day Schedule

The test center will have two sets of identical stations. Each set will run 3 cycles/day (morning, midday, afternoon). Each cycle will take 3 hours (180 minutes); 30 minutes for orientation before the test + 120 minutes for the actual test + 5-minute break + 25 minutes for changes.

The OSCE center will have two sets of 12 stations, running 3 cycles/set/day, and 12 applicants for a cycle. Therefore, the center can assess 72 applicants each day.

Table 1. List of clinical situations for long stations with standardized patients

1. Easy bruising
2. Insomnia
3. Anxiety
4. Drinking problem
5. Mood depression
6. Breaking bad news
7. Domestic violence
8. Chest pain
9. Syncope
10. Palpitation
11. Hypertension
12. Coughing
13. Dyspnea
14. Hemoptysis
15. Running nose
16. Acute abdominal pain
17. Indigestion
18. Bloody stool
19. Constipation
20. Diarrhea
21. Hematemesis
22. Jaundice
23. Vomiting
24. Short stature
25. Breast pain
26. Polyuria
27. Weight gain
28. Joint pain
29. Low back pain
30. Shoulder pain
31. Neck pain
32. Painful urination
33. Dark urine
34. Urinary incontinence
35. Vaccination consult
36. Fatigue
37. Fever
38. Multiple joint pain
39. Weight loss
40. Smoking cessation
41. Prenatal examination
42. Vaginal discharge
43. Facial flushing
44. Menstrual problems
45. Retarded growth
46. Seizure
47. Headache
48. Change in consciousness
49. Weakness of limbs
50. Sensory disturbances of limbs
51. Tremor
52. Loss of memory
53. Rashes
54. Hoarseness
55. Dizziness & vertigo
56. Visual disturbances

Table 2. List of basic procedural skills for short stations

1. Presentation of chest X-ray
2. Blood sampling for culture
3. Venous blood sampling
4. Arterial puncture
5. Urine collection for culture
6. Lumbar puncture
7. Vaginal smear
8. Wet smear for vaginal discharge
9. Electrocardiogram checking
10. Mini-mental state examination
11. Otoscope
12. Fundoscopy
13. Blood pressure check
14. Examination of neck
15. Examination of breast
16. Examination of anus and rectum
17. Examination of abdomen
18. Examination of heart
19. Evaluation of cranial nerves
20. Examination of meningeal irritation
21. Examination of motor reflexes
22. Examination of cerebellar function
23. Examination of lungs
24. Applying splint
25. Basic cardiopulmonary resuscitation
26. Simple suture
27. Intravenous injection
28. Transfusion skills
29. Injection (intramuscular, subcutaneous)
30. Scrubbing hands
31. Simple dressing
32. Dressing for burn
33. Primary management for multiple injuries
34. Local anesthesia
35. Incision and drainage of abscess
36. Normal delivery
37. Defibrillation
38. Foley catheter insertion
39. Intubation
40. Multiple pain

There are usually fewer than 3,600 applicants each year. Accordingly, we estimate about 50 test days are required between September and November.

SPs and Assessors

Each SP will work for half a day, i.e. an SP will be in the test for one half cycle, 18 applicants a day, two turns a day. Each cycle involves six long stations with an SP. Therefore, for each test day, 14 SPs are needed (six stations with one reserve SP × 2 turns).

Twenty-six assessors (or raters) are needed each day. An assessor is present at each of the 12 stations, with one reserve assessor, and two turns per day.

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